In the Claims

1. (Withdrawn) A guidewire manufacturing assembly, comprising:

an elongate shaft having a proximal end and a distal end;

a coil disposed along the length of the shaft;

a holding fixture coupled to the shaft proximate the distal end;

a solder ball disposed at the distal end;

wherein the solder ball is disposed to a flux; and

a heat source disposed proximate the solder ball.

2. (Withdrawn) The guidewire in accordance with claim 1, wherein the shaft comprises stainless steel.

3. (Withdrawn) The guidewire in accordance with claim 1, wherein the shaft comprises nickel-titanium alloy.

4. (Withdrawn) The guidewire in accordance with claim 1, wherein the coil comprises stainless steel.

5. (Withdrawn) The guidewire in accordance with claim 1, wherein the coil comprises nickel-titanium alloy.

6. (Withdrawn) The guidewire in accordance with claim 1, wherein the holding fixture comprises a heat sink.

7. (Withdrawn) The guidewire in accordance with claim 1, further comprising a heat shrink tube coupled to the shaft.

8. (Withdrawn) The guidewire in accordance with claim 7, wherein the shrink tube comprises polytetrafluoroethylene.

9. (Currently Amended) A method of forming an atraumatic distal tip on a guidewire, comprising:

providing an elongate shaft having a distal end and a coil disposed along ~~the~~ a length of the shaft;

providing a solder ball;

providing a quantity of flux proximate the solder ball;

disposing the solder ball at the distal end of the shaft; and

heating the solder ball, wherein heating activates the flux and allows the solder ball to at least partially melt and flow into the coil and around the shaft, wherein an atraumatic tip is formed by solder remaining at the distal end of the shaft.

10. (Original) The method in accordance with claim 9, wherein the step of providing a quantity of flux proximate the solder ball includes dipping the solder ball in the flux.

11. (Original) The method in accordance with claim 9, wherein the step of providing a quantity of flux proximate the solder ball includes disposing the flux at the coil proximate the distal end of the shaft.

12-13. (Cancelled)

14. (Currently Amended) The method in accordance with claim 1 ~~12~~, further comprising a step of coupling the shaft to a holding fixture, wherein the holding fixture holds the shaft in a vertical orientation.

15. (Original) The method in accordance with claim 9, wherein the guidewire further comprises a heat shrink tube coupled to the shaft.

16. (Original) The method in accordance with claim 15, wherein the heat shrink tube stops proximal flow of flux during the step of heating the solder ball.

17. (Currently Amended) A method of forming an atraumatic distal tip on a guidewire, comprising:

providing an elongate shaft having a distal end a coil disposed along ~~the~~ a length of the shaft;

coupling the shaft to a holding fixture;

providing a solder ball;

providing a quantity of flux proximate the solder ball;

disposing the solder ball at the distal end of the shaft; and

heating the solder ball, wherein heating activates the flux and allows the solder ball to at least partially melt and flow into the coil and around the shaft, wherein an atraumatic tip is formed by solder remaining at the distal end of the shaft.

18. (Original) The method in accordance with claim 17, wherein the step of providing a quantity of flux proximate the solder ball includes dipping the solder ball in the flux.

19. (Original) The method in accordance with claim 17, wherein the step of providing a quantity of flux proximate the solder ball includes disposing the flux at the coil proximate the distal end of the shaft.

20. (Original) The method in accordance with claim 17, wherein the holding fixture holds the shaft in a horizontal orientation.

21. (Original) The method in accordance with claim 17, wherein the holding fixture holds the shaft in a vertical orientation.

22. (Original) The method in accordance with claim 17, wherein the guidewire further comprises a heat shrink tube coupled to the shaft.

23. (Original) The method in accordance with claim 22, wherein the heat shrink tube stops proximal flow of flux during the step of heating the solder ball.

24. (Withdrawn) A guidewire manufacturing assembly, comprising:

an elongate shaft having a proximal end and a distal end;

a coil disposed along the length of the shaft;

a holding fixture coupled to the shaft proximate the distal end;

an atraumatic distal tip coupled to the distal end of the shaft;

wherein the atraumatic distal tip is formed of a solder ball coupled with flux that has been at least partially melted; and

a heat source disposed proximate the solder ball.

25. (Withdrawn) A guidewire manufacturing assembly, comprising:

an elongate shaft having a proximal end and a distal end;

a coil disposed along the length of the shaft;

a holding fixture coupled to the shaft proximate the distal end;

an atraumatic distal tip coupled to the distal end of the shaft, the atraumatic distal tip formed of a solder ball that has been at least partially melted.

26. (Withdrawn) A guidewire manufacturing assembly, comprising:

an elongate shaft having a proximal end and a distal end;

a coil disposed along the length of the shaft;

a polytetrafluoroethylene heat shrink tube coupled to the shaft;

an atraumatic distal tip coupled to the distal end of the shaft, the atraumatic distal tip formed of a solder ball that has been at least partially melted.

27. (New) A method of forming an atraumatic distal tip on a guidewire, comprising:

providing an elongate shaft having a distal end and a coil disposed along a length of the shaft;

coupling the shaft to a holding fixture, whereby the holding fixture holds the shaft in a horizontal orientation;

providing a solder ball;

providing a quantity of flux proximate the solder ball;

disposing the solder ball at the distal end of the shaft; and

heating the solder ball, wherein heating activates the flux and allows the solder ball to at least partially melt and flow into the coil and around the shaft, wherein an atraumatic tip is formed by solder remaining at the distal end of the shaft.